LineSwitch - Application Note

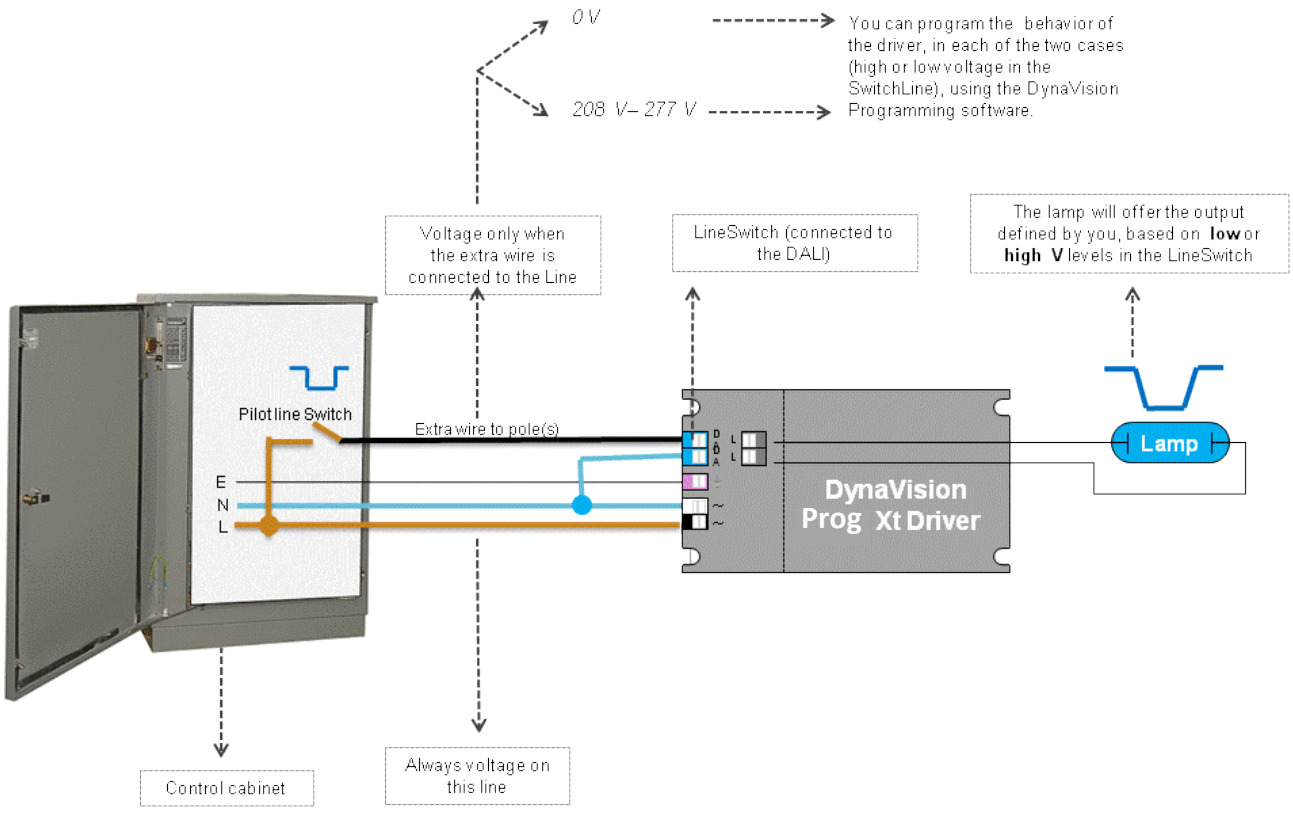
Philips offers an extensive range of solutions to control light. One of the simplest solutions is the LineSwitch feature which works by using the pilot line extra wire. This function is integrated in all DynaVision Prog drivers. It is a one-step-dimming solution which enables users to dim (to a predefined level) groups of light points, with only one push of a button. The same function can be used to *control luminaries via a sensor (presence detection or light detection)*. Instead of having the LineSwitch connectors to a pilot line, connect those to the sensor..

Technical Requirements

The wiring to the dim input of an Xtreme DALI lamp driver must fulfil at least the following requirements:

- Suitable for mains voltage (insulation); copper diameter is not critical because it is a signal line and the running current can be neglected.
- The total cable length of the pilot line may not exceed 56 metres per lamp driver on basis of 100 pF/m(so for 10 lamp drivers 560 metres of cable is the maximum). This is the length of the cable from lamp driver to lamp driver, so the cables in the lamp posts (if the lamp driver is mounted inside the luminaire) have to be included. For example: if 8-metre lamp posts are used, with a gap of 40 metres in between, the cable length used is just on specification (2x8 + 40 = 56 metres to get from one lamp driver to the next).
- If longer cables are being used, a parallel capacitor of 2uF has to be added to avoid residual voltage on the pilot line when switched off, to which the ballast could respond wrongly.

The changeover, from full light level output to dimmed level, is done by connecting introducing 0 or (208-277) V in the DALI connectors.


0 V
208 V– 277 V
You can program the behavior of the driver, in each of the two cases (high or low voltage in the SwitchLine), using the DynaVision Programming software.
Voltage only when the extra wire is connected to the Line
LineSwitch (connected to the DALI)
The lamp will offer the output defined by you, based on low or high V levels in the LineSwitch
Pilot line Switch
Extra wire to pole(s)
E
N
L
DynaVision Prog Xt Driver
Lamp
Control cabinet
Always voltage on this line

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Benefits

- Flexible one step dimming: you can dim up and down at any point – with no timing constraint
- Group control dimming
- Easy to use: dim with just the push of a button
- Integrated in the driver:
- It is fully protected: lightning strokes at the LineSwitch input do not affect the driver

Enable the LineSwitch function in the drivers via the MultiOne programming tool

The feature can be enabled via the DynaVision Prog Xt Programming software in combination with the USB DALI programmer.

The parameters to be defined are:

- Light Output when High V level at the LineSwitch input:
- Light Output when Low V level at the LineSwitch input

Please see the user manual of the MultiOne software for details about programming the LineSwitch feature: www.philips.com/multione